REMARKS

In an advisory action mailed on December 23, 2002, claims 1-14 continue to be rejected by the Examiner under 35 U.S.C. 103 (a) as being unpatentable over U.S. Patent No. 5,905,271 to Wynn ("Wynn"). Applicants respectfully traverse this rejection. Applicants have amended claim 1 and added claim 24 herewith to more clearly define the invention and distinguish it over prior art. Applicants respectfully submit that the currently amended claim 1 from which claims 2-14 depend are not obvious by the disclosure provided in Wynn (or previously cited Dätwyler). It is further respectfully submitted that newly added claim 24 is patentably distinct over Wynn and previously cited Dätwyler. Support for the amendment to claim 1 is found generally throughout the specification and in particular on page 6 lines 4-11. Support for newly added claim 24 is found generally throughout the specification and in particular on page 7 lines 2-3.

Wynn discloses a flow cell having an adjustable stepped window that is accommodated within the flow cell in which the optical pathlength through the product stream can be precisely adjusted by movement of either stepped element. In contrast, Applicants disclose and claim a fixed stepped element having a stem length that is selected to increase or decrease the fixed, non-adjustable fluidic measurement pathlength. The stepped element of the instant claimed invention is fixed and is not adjustable and provides for a "fixed, non-adjustable fluidic pathlength".

The pathlength of Wynn can be adjusted by rotating bodies within rings, with O-rings being compressed as the windows are moved in an inward direction. Those O-rings also cooperate with O-rings to hold the windows firmly in place between flanges and the bottom walls of recessed areas as the windows are advanced and retracted. The amount of window travel is limited by the compression of the O-ring and is typically on the order of 0.3mm per window, or 0.06 mm for the two windows. Specifically, Wynn suggests windows that are moved back and forth in order to finely adjust the optical path between windows. This adjustment to optical pathlength is emphasized within Wynn as follows:

> "Rotation of the adjuster bodies provides a vernier adjustment which permits the spacing between the windows, and hence the length of the optical path between the windows, to be set with a high degree of precision." (Column 3 lines 6-9, emphasis added).

Contrary to Wynn, in Applicants' claimed invention the element holder of the flow cell is configured so that "pressure exerted against said substantially planar sealing surface of said stepped element and said substantially planar sealing surface of said cell body cause said stepped element to be fixed and reliably sealed within said cell body". The fixed, non-adjustable fluidic measurement pathlength cannot be varied. The measurement pathlength can only be changed by an increased or decreased stem length of the fixed stepped element and not by movement of the stepped element.

Applicants' claimed invention is specifically configured to avoid problems with adjustable flow cells, such as disclosed in Wynn. As Applicants have noted within the specification, a fixed stepped element avoids the potential for contamination from unswept volumes due to adjustable sealing mechanisms. Further the inability to use a "substantially planar sealing surface", such as in the presently claimed invention, due to configurations needed in an adjustable flow cell add to the contamination problem. While this contamination problem may not be a major issue at high preparative flow rates, it becomes increasingly problematic at flow rates that are typical of analytical work. Another deficiency of adjustable flow cells, such as Wynn, is that they are generally more difficult to rebuild and maintain than the standard non-adjustable cells. Applicants' claimed invention that has a fixed stepped element allows changing the fluidic pathlength by changing stepped elements, but prevents contamination that can occur in a flow cell having an adjustment mechanism as disclosed in Wynn.

It is respectfully submitted that Wynn does not suggest or teach a flow cell having "a stepped element having a stem and a base, said stem having an end surface protruding into said fluidic channel creating a fixed, non-adjustable fluidic measurement pathlength and said base having a substantially planar sealing surface, a length of said stem being selected to increase or decrease said fixed, non-adjustable fluidic measurement pathlength". By the amendments herein, the Applicants respectfully submit that the rejections of record have been overcome.

Applicants respectfully suggest that the apparatus of amended claim 1 and the method of creating an accurate fixed measurement pathlength as claimed in newly added claim 24 is neither taught or suggested by either Wynn or previously cited Dätwyler. Both Wynn and Dätwyler disadvantageously use)-rings for sealing. Neither Winn nor Dätwyler disclose or suggest a

"substantially planar sealing surface. Applicants' method of changing pathlength is by the selection of a stem length of a stepped element having a substantially planar sealing surface and an element holder having a substantially planar sealing surface "whereupon pressure exerted against said substantially planar sealing surface of said stepped element and said substantially planar sealing surface of said cell body cause said stepped element to be fixed and reliably sealed within said cell body with said stem protruding into said fluidic channel creating said fixed. Non-adjustable fluidic measurement pathlength." Applicants' claimed invention is patentably distinct from that of Wynn or Dätwyler and Applicants would respectfully request its allowance.

CONCLUSION

Accordingly, it is believed that in view of the above amendments and remarks, all claims are in condition for allowance, and therefore reconsideration and allowance are earnestly solicited. If the Examiner feels that a telephone conference would expedite prosecution of this case, or resolve any remaining issues, the Examiner is invited to contact the undersigned at (617) 856-8369.

Respectfully submitted,

Dated: April 2, 2002

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